## MOTHERCRAFT AND INFANT WELFARE.

NATIONAL existence is to a large extent dependent upon the quantitative value of the population, and diminution of population is the downward path which, if continued, must eventually lead to national extinction. The population of any country is the resultant of the balance between births and deaths and between emigration and immigration. In the British Isles, while emigration is a material factor in reducing population, the principal influence securing its continuous increase is the excess of births over deaths.

Unfortunately for the nation, a persistent and serious fall in the birth-rate in the United Kingdom has been in progress for many years, from 30·7 per 1000 of population in 1887 to 24·0 in 1913, and to 23·3 in the June quarter of this year. What this means is better seen from the actual number of births; in England and Wales alone for the last September quarter the births were 28,000 fewer than in the corresponding quarter of 1913! Fortunately, the natural increase of population during the same period has almost been maintained by a striking diminution in the death-rate. It is of interest that decline in the birth-rate is by no means confined to the United Kingdom, but has occurred in many countries on the Continent, the principal factor causing it here and elsewhere being a diminution in the size of the family, chiefly, apparently, in consequence of intentional restriction of child-bearing.[1]

We cannot anticipate any increase in the birth-rate at present, but rather a further decrease, for the toll exacted by the present war on the flower of the nation's manhood, the fathers and prospective fathers of her children, is sadly heavy.

It is of the utmost importance, therefore, that every means should be employed which may tend to maintain the effective fertility of the nation to the utmost practicable extent. If it be impracticable to increase the number of births, it is practicable to reduce still further the number of deaths of infants and children. As a matter of fact, infant mortality[2] has undergone a striking decline since the beginning of the century—from about 158 in 1900 to 105 in 1914. But, even so, the possibilities of saving child-life are by no means exhausted. If the chief causes of mortality during infancy and the first five years of life be examined, it will be found that one-fifth of the deaths in infancy and nearly one-third of the deaths in childhood are due to measles, diarrhœa and enteritis, whooping-cough, and tuberculosis. Bronchitis and pneumonia account for about one-fifth of the remaining deaths, and conditions operating at and before birth (premature birth, injury at birth, etc.) for another fifth. Measles and whooping-cough in themselves are not mortal diseases, the deaths arising mainly from exposure, inefficient nursing, and unhygienic conditions, and much may be done to reduce the mortality from these and the other diseases mentioned by improved care of the sick. It is evil conditions of environment, and not poverty only, which kill children and damage survivors; this is well shown by the variation of the death-rate among children in different parts of the community. In 1911–13 the infant mortality in Wigan was 165, in Nelson 87, and the death-rate at ages one to five in the same localities was 119 and 58 respectively. The children of miners, a relatively prosperous portion of the community, die at the rate of 166, of doctors at the rate of 40!

Unfortunately, during the last year the infant and child death-rates have shown an alarming tendency to rise, and during the first half of the present year the mortality from measles has doubled. It can hardly be doubted that this is largely due to the increased employment of women and consequent neglect of the home, and to the diversion of the activity of health visitors, district nurses, and others, who hitherto have done splendid work in helping to look after the children of the poor, into other channels more closely connected with the war.

With the view of reducing the mortality from measles, the Local Government Board has just issued an order making measles and German measles notifiable throughout England and Wales, and enabling local authorities to undertake measures for the care of patients suffering from these diseases.

A national campaign to promote the welfare of mothers and infants has also been inaugurated, and meetings were held at the Guildhall on October 25 and 26.

Municipal enterprises in the form of ante-natal clinics and maternity homes, infants' departments and milk depôts, feeding of expectant and nursing mothers, pre-school and post-school clinics, etc., should be encouraged in every way; what may be done in this direction is well shown by the example of Bradford, which has established departments in all these branches.[3]

Another factor which both lowers the birth-rate and tends to increase infant mortality is maternal mortality in connection with child-bearing, for obviously the mothers who thus lose their lives, had they lived, would in many instances have borne other children, while the infant is more likely to survive when cared for by its mother. In the four years 1911–14 the number of deaths of mothers assigned to complications of pregnancy and childbirth in England and Wales was 14,045, corresponding to a rate of 4·0 per 1000 births. The mortality among mothers due to child-bearing varies in different parts of the country. It is highest in Wales and Westmorland, and may there, perhaps, be ascribable to deficiency of skilled assistance in childbirth; it is also very high in textile areas, where female labour is largely employed. But the question is a complicated one, for we find that the mortality

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[1] See "Report on Maternal Mortality in connection with Child-bearing and its Relation to Infant Mortality" (Rep. of the Med. Officer of the Loc. Gov. Board) for many of the data and details mentioned in this article.

[2] "Infant mortality" is the number of deaths of infants during the first year of life per 1000 births.

[3] See "Maternity and Child Welfare." By E. J. Smith. (P. S. King and Co.) Price 1s. net.

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from child-bearing is practically the same in St. Helens and in Croydon—two towns which differ markedly in general social and sanitary circumstances, and West Ham, a relatively poor and squalid neighbourhood, has a rate lower than that of towns like Brighton, Bournemouth, and Hastings! When it is realised that the mortality from child-bearing varies from 8·54 in Dewsbury to 2·20 in West Ham, it follows that by the adoption of improved measures of care of the prospective mothers before and at childbirth, we may hope materially to reduce what is one of the most pathetic forms of loss of life. The care of prospective mothers is still more necessary at the present time, when there is such a considerable increase in female labour, and such care will, in addition, diminish the number of still-births and of damaged children born.

Not only the maintenance, but the further increase, of our present rate of increase of population must be regarded as one of the most serious and urgent of national problems and responsibilities at the present time. The child is now a national asset of great price, and for the successful rearing of the greatest possible number we must look to improved care of prospective and actual mothers, and improvement of mothercraft and of infant and child welfare. R. T. HEWLETT.

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## MEDICAL RESEARCH.

THE first annual report (1914–1915) of the Medical Research Committee has been published. It bears date October 18, which is very appropriate, because that is St. Luke's day, the day of the beloved physician. St. Luke's medical knowledge, doubtless, was that which Browning ascribes to Karshish: we have improved on St. Luke, so far as medicine is concerned. This report is a notable bit of work. The Medical Research Committee, as we all know, was born of the Insurance Act, and was endowed, at birth, with a penny in the pound. It was intended to study the diseases of civil and industrial life. It was born in August, 1913. A twelvemonth later came the war. *Pendent opera interrupta*—the work on the diseases of dangerous trades, the work on the commoner maladies of our big cities, was more or less declared off. The nation was thrown, all of a sudden, all unprepared, into that most dangerous of all dangerous trades, War.

In this crisis, this day of judgment—for that is the meaning, and the only meaning, of the Greek word crisis—the Medical Research Committee took a very wise course. It added to its first scheme of work a series of proposals for special work, to be undertaken by the committee, in direct connection with the war and for the assistance of the Army Medical Department; and it made up its mind that as the war goes on there will be less and less work to be done for the nation apart from the Navy and the Army.

Not only was the plan of work upset by the war, but the Central Research Institute, the buildings of the Mount Vernon Hospital at Hampstead, had to be transformed into the Hampstead Military Hospital. And, as the proposals for amalgamation with the Lister Institute, after very careful consideration, have been suspended, we might say that the Medical Research Committee is still without a proper home of its own. But it has found many temporary homes or resting-places for its work, and a welcome for it everywhere.

The researches into subjects connected with the war cover a very wide range. Work has been done at many of the general hospitals of the Territorial Force, and at other military hospitals. Valuable help has been given towards the preparation of the medical history of the war. Wound infections, typhoid and paratyphoid infections, and cerebro-spinal fever have been very carefully studied; so have many problems apart from bacteriology. Special interest attaches to Dr. Leonard Hill's study of asphyxiating gases, and to Dr. John Freeman's expedition to Galicia, whence he brought back cultures of strains of cholera-bacilli, for St. Mary's Hospital to make anti-cholera vaccines for the Serbian Government and for our Mediterranean forces; and to Dr. Leiper's discovery that a fresh-water snail is the intermediate host, between man and man, of the Bilharzia parasite. Other important studies include the work done on "neurological" cases, and the testing of British makes of salvarsan.

In brief, this report is a very fine record of good work done under most unexpected conditions. The moral is, that he or she who works for the forces of the Allies is working also, in the long run, for the nation at home. It is not a weakness, but an added strength, of science, that it can adapt itself to circumstances, and venture into new fields of research at a moment's notice. When the war is over, there will be time enough for the workers under the Medical Research Committee to come back to win other laurels for science in the ways of peace.

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## FOOD ECONOMY.

A NUMBER of useful pamphlets are being issued just now on how to economise in war time in the matter of food. One of these, by Prof. W. H. Thompson, of Trinity College, Dublin, we noticed a short time ago. The latest that has come into our hands, entitled "Food Economy in War Time" (Cambridge: At the University Press, price 6*d*.), should be widely read and acted upon. It is written by Profs. T. B. Wood and F. G. Hopkins, both of whom can speak with authority, one from the agricultural, the other from the physiological, point of view. It is written in a clear style, such as the man in the street, or, what is more important, the woman in the kitchen, can understand.

There are many in this country who cannot economise; they already exist on the minimum. Saving must therefore be accomplished by the comparatively well-to-do, and that this can be done without detriment to health is clearly shown.

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